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**Accu-Son equipment
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Alb House
Lanely Ro

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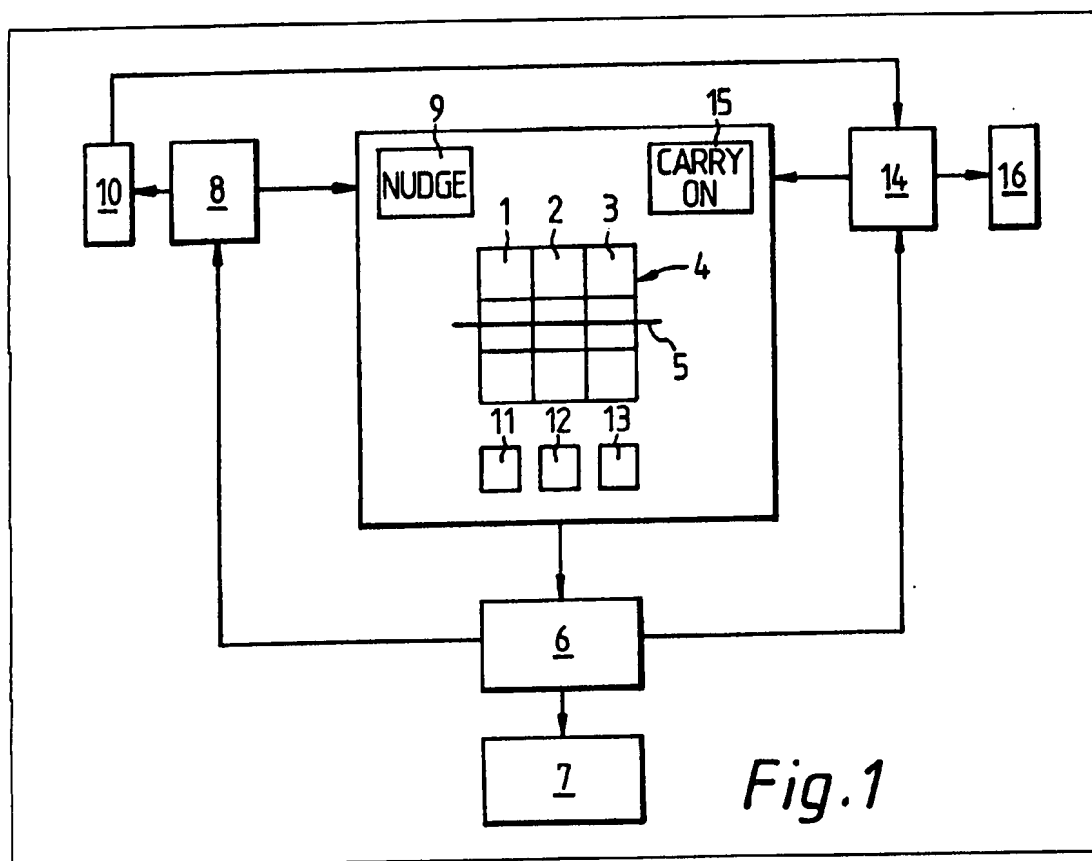
(72) Inventor

(74) Agents
Forrester Ketley and Co
Forrester House
52 Bounds Green Road
London N11 2EY

(54) Gaming or amusement machines

(57) A fruit machine has a primary nudge feature game provided by a primary nudge feature selector (8) whereby a player is enabled to move individual reels (1, 2, 3,) from their rest positions in predetermined steps, the total number of steps available to the player during the primary feature game being limited by time or number, in which machine a secondary nudge feature game is awarded on a random basis by a secondary nudge feature selector (14) following a primary feature

game to enable, when available, the player to continue stepping the reels after the steps of the primary nudge feature game have been exhausted.



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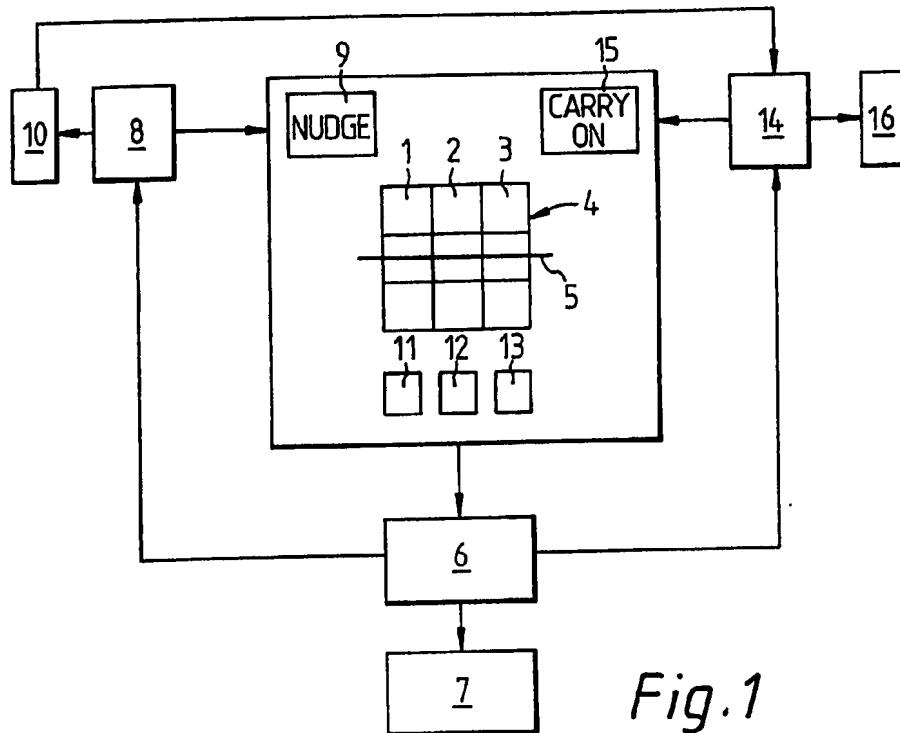


Fig. 1

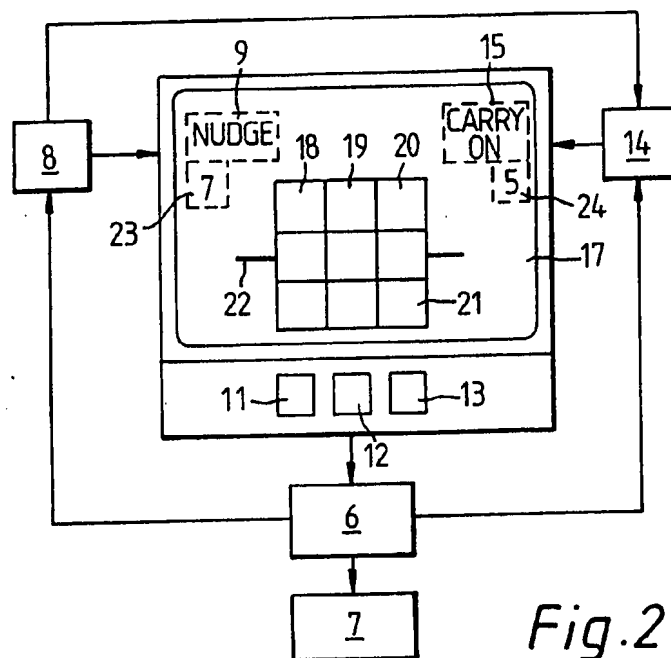


Fig. 2

SPECIFICATION

Improvements in or relating to gaming or amusement machines

5 **THIS INVENTION** relates to a gaming or amusement with prizes machine, in particular a so-called fruit machine.

A fruit machine has a plurality of coaxial
10 rotatable reels each having a sequence of symbols arranged around its periphery. Normally, the reels are freely rotated during a game and then stopped at random so that, at the end of the game, the combination of
15 symbols displayed by predetermined portions of the reel peripheries in an evaluation area (defined for example by a window of the machine through which the predetermined peripheral portions of the reel are visible)
20 determines, according to predetermined rules, whether or not the player has won a prize and, if so, the value of the prize.

Although traditionally fruit machines have had mechanical reels, video fruit machines
25 have been proposed in which simulated reels or reel substitutes are displayed as images on an electronic display screen, such as a cathode ray tube. In the present description, the term "reel" is intended to embrace such
30 simulated reels and reel substitutes.

In addition to, or instead of, the normal game in which the reels are freely rotated, some known fruit machines provide so-called feature games which are randomly available,
35 possibly at the beginning of a game but more usually at the end of a game.

One such feature game is the so-called "nudge" feature which is usually provided on a random basis at the end of a losing normal
40 game. In a nudge feature game, the player is enabled to move the individual reels from their rest positions, one at a time and in steps each corresponding to a single symbol position on the reel periphery, in an endeavour to
45 achieve a winning combination of symbols in the evaluation area. Usually a control button is provided for each reel such that, during a nudge feature game, the player can initiate stepped movement of a reel by pressing the
50 corresponding control button and arrest the movement of the reel by releasing the control button.

A limit is placed on the total number of steps by which the reels can be moved during
55 a nudge game. For example, the nudge feature may be energised for a predetermined period of time and the player allowed to make as many steps as he can obtain during the given time period. In another form of the
60 nudge feature game, the player is awarded a randomly selected number of movement steps up to predetermined maximum, the number of steps available during a particular feature game often being indicated to the player.

65 It is an object of the present invention to

provide a fruit machine having an improved feature game facility.

Accordingly, the invention provides a fruit machine having a primary nudge feature
70 game whereby a player is enabled to move individual reels from their rest positions in predetermined steps, the total number of steps available to the player during the primary feature game being limited by time or
75 number, in which machine a secondary nudge feature game is awarded on a random basis following a primary feature game to enable, when available, the player to continue stepping the reels after the steps of the primary
80 nudge feature game have been exhausted.

Preferably, the availability or otherwise of the secondary nudge feature game is only indicated to the player after the movement steps of the primary nudge feature game have
85 been exhausted.

In one form of the invention, the secondary nudge feature is energised for a predetermined time and the player allowed as many steps as he can achieve during the given time
90 period.

In another form of the invention, the player is awarded a randomly selected number of steps up to a predetermined maximum, the number of steps available during a particular
95 secondary nudge feature game desirably being indicated to the player.

In order that the invention may be readily understood, an embodiment thereof will now be described, by way of example, with reference to the accompanying drawing, in which:

100 *Figure 1* is a schematic view of the display and control panel of a mechanical fruit machine embodying the invention; and

Figure 2 is a schematic view of the display screen and control panel of a video fruit machine embodying the invention.

Referring to Fig. 1, a simple mechanical fruit machine embodying the invention comprises coaxial rotatable reels 1 to 3, each
110 having a selected sequence of symbols arranged around its periphery. After rotation of the reels to play a normal game, the reels are stopped at random and three symbols on each of the stopped reels are visible in an evaluation area defined by a window 4 provided
115 with a central payline 5 extending transversely to the reel peripheries. The combination of symbols appearing in the window 4 at the end of a normal game is evaluated by a win
120 evaluating device 6 of the machine which determines, according to predetermined rules, whether or not the player has won a prize and, if so, the value of the prize.

In the event of a winning combination of
125 symbols being present, the win evaluating device 6 instructs a payout mechanism 7 to pay out the appropriate prize to the player.

In the event of a losing game, the win evaluating device 6 informs a primary nudge
130 feature selector 8 and the selector then deter-

mines on a random basis whether or not a primary nudge feature game is to be made available to the player. If so, the selector 8 lights a primary nudge game indicator 9, for example, displaying the legend "NUDGE" and starts a primary timer 10. During the period of timer 10 the player is able to step the individual reels 1 to 3, one at a time in individual steps corresponding to one symbol position on the reel periphery, in an attempt to achieve a winning combination. Movement of any reel is initiated by pressing the corresponding one of three push buttons 11, 12 and 13 and the reel is arrested by releasing the button.

At the end of the timed period, the timer informs a secondary nudge feature selector 14, which selector then determines on a random basis whether or not a secondary nudge feature game is to be made available to the player. If so, the selector 14 lights a secondary nudge game indicator 15 (displaying, for example, the legend "CARRY ON") and starts a secondary timer 16. During the period of the timer 16 the player is able to continue stepping the reels in an endeavour to obtain a winning combination of symbols.

Fig. 2 illustrates a simple video fruit machine which is similar to the Fig. 1 embodiment except that the reels 1 to 3 are images on a display screen 17 constituted by the screen of a cathode ray tube. Electronic circuitry (not shown) of the machine operates in known manner to produce on the screen 17 an image consisting of three columns 18 to 20 of symbols, each column having three symbol locations 21 and representing the visible periphery of a fruit machine reel rotatable about an axis parallel to the screen. During a game the electronic circuitry of the machine changes the displayed image in such a way that the symbols of a column travel down the column to disappear at the bottom of the column to be replaced by new symbols added to the top of the column, thereby simulating the rotation of reels in a mechanical fruit machine. At the end of the game the movement of the symbols is stopped and the combination of symbols on a payline 22 in the resulting static final image determines whether or not a player has won.

The embodiment of Fig. 2 has a win evaluating device 6 and payout mechanism 7 as for the embodiment of Fig. 1. However, in this case the primary feature game selector 8 serves to select a random number of movement steps within the range from 1 to 10 steps and, in addition to displaying a primary nudge game indication 9, also indicates the number of movement steps available to the player by displaying the appropriate number in a position 23. The player can then move the reels by means of the buttons 11 to 13 by up to the indicated number of steps.

After the number of steps allowed by the

primary nudge game has been exhausted, the selector 8 informs the secondary nudge feature selector 14, which selector then determines on a random basis whether or not a secondary nudge feature game is to be made available to the player. If so, the selector 14 randomly selects a number of movement steps within the range of from 1 to 10 steps and, in addition to displaying a secondary game indication 15, also indicates the number of steps available by displaying the appropriate number at position 24. The player can then continue to step the reels for up to the indicated number of further steps. The range of 1 to 10 mentioned for the number of steps available in the primary and secondary feature games is, of course, given merely by way of example and different ranges could be used.

Although for simplicity the invention has been described with reference to machines having three reels each displaying three symbols to the player, clearly the invention is applicable to a machine having any number of reels and with any number of symbols visible in each reel.

Similarly, while the first embodiment has been described as having the number of steps in both the primary and secondary feature games limited by time and the second embodiment has been described as having the number of steps in both the primary and secondary feature games limited by number it is envisaged that in fact the steps available in the primary and secondary feature games may be limited in different manners. For example, the steps in the primary feature game may be limited by time and the steps in the secondary feature game by number.

In both described embodiments, the win evaluator is connected to the secondary feature game selector 14 to inhibit operation of the selector if a winning combination is evaluated during the primary feature game, so that the secondary feature game is only available on a random basis after a losing primary game.

CLAIMS

1. A fruit machine having a primary nudge feature game whereby a player is enabled to move individual reels from their rest positions in predetermined steps, the total number of steps available to the player during the primary feature game being limited by time or number, in which machine a secondary nudge feature game is awarded on a random basis following a primary feature game to enable, when available, the player to continue stepping the reels after the steps of the primary nudge feature game have been exhausted.

2. A fruit machine according to claim 1, wherein the availability or otherwise of the secondary nudge feature game is only indicated to the player after the movement steps

of the primary nudge feature game have been exhausted.

3. A fruit machine according to claim 1 or 2, wherein the secondary nudge feature is energised for a predetermined time and the player allowed as many steps as he can achieve during the given time period.

4. A fruit machine according to claim 1 or 2, wherein the player is awarded a randomly selected number of steps up to a predetermined maximum.

5. A fruit machine according to claim 4, wherein the number of steps available during a particular secondary nudge feature game is indicated to the player.

6. A fruit machine substantially as hereinbefore described with reference to and as illustrated in Fig. 1 of the accompanying drawing.

7. A fruit machine substantially as hereinbefore described with reference to and as illustrated in Fig. 2 of the accompanying drawing.

8. Any novel feature or combination of features described herein.